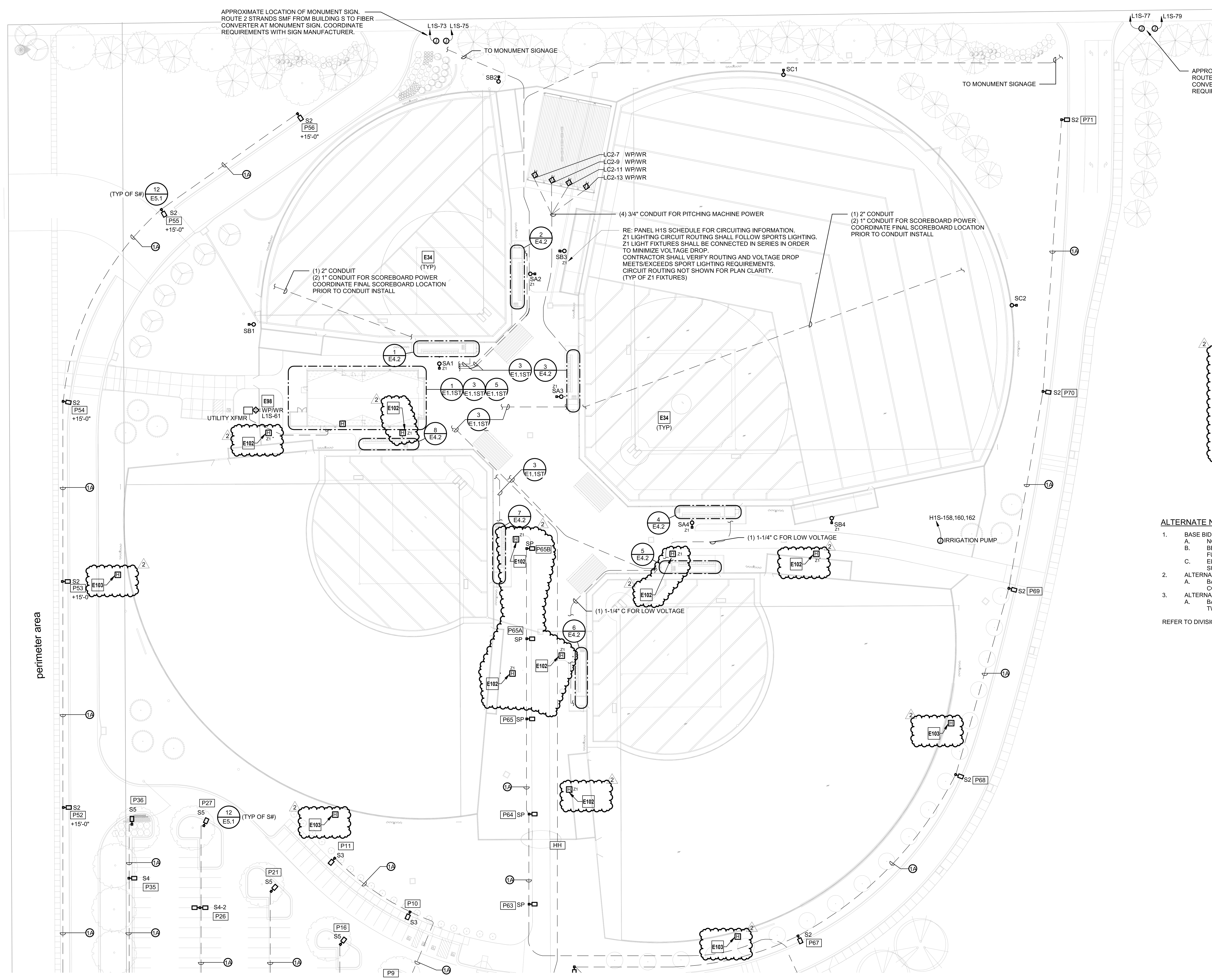

1 ELECTRICAL SITE PLAN - NORTH
1" = 40'-0"

POLE/MOUNTING HEIGHTS

FIXTURE	HEIGHT
SP	+12'-0"
S2	+20'-0"
S3	+20'-0"
S4	+20'-0"
S4-2	+20'-0"
S5	+20'-0"
W1,W1E	+12'-0"
W2,W2E	+12'-0"
W8,W8E	CANOPY CEILING MOUNTED
W16,W16E	VERTICAL WALL MOUNTING
WW	19'-7"

NOTE: THE ABOVE HEIGHTS ARE TYPICAL PER FIXTURE UNLESS NOTED OTHERWISE ON PLANS.

VOLTAGE DROP CALCULATIONS - ATHLETIC LIGHTING

	PNL***-CKT	Identification		Source Pole	Conduit Type	Conductor Material	No. of	Wire Size	Voltage	Phase	Circuit Length	Power Factor	Circuit Load	Branch Voltage Drop
		Pole	Fixture		P or S	CU or AL	Sets	(Phase)			(Feet)*	(PF)	(Amps)**	(%)
	1,3,5	SA1	-	-	P	CU	1	10	480	3	235	0.90	5.900	0.551%
	7,9,11	SA2	-	-	P	CU	1	10	480	3	385	0.90	5.900	0.903%
	13,15,17	SB1	-	-	P	CU	1	10	480	3	235	0.90	10.500	0.981%
	19,21,23	SB2	-	-	P	CU	1	10	480	3	565	0.90	10.500	2.359%
	25,27,29	SA3	-	-	P	CU	1	10	480	3	315	0.90	9.100	1.140%
	31,33,35	SA4	-	-	P	CU	1	10	480	3	440	0.90	9.100	1.592%
	37,39,41	SB3	-	-	P	CU	1	8	480	3	410	0.90	17.300	1.855%
	43,45,47	SB4	-	-	P	CU	1	6	480	3	630	0.90	19.200	2.022%
	49,51,53	SC1	-	-	P	CU	1	6	480	3	755	0.90	15.300	1.931%
	55,57,59	SC2	-	-	P	CU	1	6	480	3	890	0.90	15.300	2.276%
FUT	2,4,6	SA5	-	-	P	CU	1	10	480	3	415	0.90	9.100	1.501%
FUT	8,10,12	SA6	-	-	P	CU	1	10	480	3	485	0.90	9.100	1.755%
FUT	14,16,18	SB5	-	-	P	CU	1	8	480	3	540	0.90	14.100	1.991%
FUT	20,22,24	SB6	-	-	P	CU	1	8	480	3	620	0.90	14.100	2.286%
FUT	26,28,30	SC3	-	-	P	CU	1	8	480	3	830	0.90	10.900	2.366%
FUT	32,34,36	SC4	-	-	P	CU	1	8	480	3	880	0.90	10.900	2.508%
FUT														
FUT	38,40,42	SA7	-	-	P	CU	1	10	480	3	310	0.90	9.100	1.122%
FUT	44,46,48	SA8	-	-	P	CU	1	10	480	3	140	0.90	9.100	0.507%
FUT	50,52,54	SB7	-	-	P	CU	1	10	480	3	460	0.90	14.100	2.579%
FUT	56,58,60	SB8	-	-	P	CU	1	10	480	3	120	0.90	14.100	0.673%
FUT	62,64,66	SC5	-	-	P	CU	1	10	480	3	365	0.90	10.900	1.582%
FUT	68,70,72	SC6	-	-	P	CU	1	8	480	3	675	0.90	10.900	1.924%

*Circuit length assumes reasonable conduit paths to pole, routed around playing field, 90-degree turns, and 70' for maximum pole height. Circuit length shall be assumed as approximate. Provide documentation during athletic field lighting submittal for review - contractor shall update circuit length and confirm no circuits exceed 2.8% voltage drop. Conduit pathways shall not be routed under any playing surfaces.

**Circuit load provided by Musco Lighting

~~***Circuits are fed from panel H1S and routed through Musco Lighting relay panels.~~

FUT - Indicates pole is in a future scope, information left in for refernce only, provide conduits for future as indicated

ALTERNATE NO. 3 - ATHLETIC FIELD LIGHTING:

1. BASE BID -
   A. NO FIELD LIGHTING TO BE PROVIDED FOR BASEBALL/SOFTBALL.
   B. BELOW GRADE CONDUIT TO POLE LOCATIONS TO BE PROVIDED FOR FUTURE FIELD LIGHTING.
   C. ELECTRICAL SERVICE AT CONCESSIONS BUILDING TO BE SIZED TO SUPPORT FIELD LIGHTING FOR ALL FOUR BASEBALL/SOFTBALL FIELDS.
2. ALTERNATE BID #1 -
   A. BASE BID + FIELD LIGHTING TO BE PROVIDED FOR TWO NORTH VARSITY COMPETITION BASEBALL/SOFTBALL FIELDS.
3. ALTERNATE BID #2 -
   A. BASE BID + ALTERNATE BID #1 + FIELD LIGHTING TO BE PROVIDED FOR TWO SOUTH BASEBALL/SOFTBALL FIELDS.

REFER TO DIVISION 1 SPECIFICATIONS FOR ADDITIONAL INFORMATION ON ALTERNATES.

ELECTRICAL PLAN NOTES:

E34 RE: VOLTAGE DROP AND PANEL SCHEDULES FOR ADDITIONAL INFORMATION. TYPICAL OF SA#, SB#, AND SC# ATHLETIC FIELD LIGHTING FIXTURES.

E98 PROVIDE PEDESTAL MOUNTED RECEPTACLE TO SERVE IRRIGATION CONTROLLER, COORDINATE LOCATION WITH ARCHITECT.

E102 SOUTHERN BASEBALL/SOFTBALL FIELD(S)SPORTS LIGHTING POLES HAVE BEEN REMOVED FROM PROJECT SCOPE. CONTRACTOR TO PROVIDE PROVISIONS FOR FUTURE SPORTS LIGHTING POLES AT SOUTHERN BASEBALL/SOFTBALL FIELD(S). PROVIDE (1) HAND HOLE, (1) 1" CONDUIT WITH PULL STRING AND (1) 3/4" CONDUIT WITH PULL STRING (FOR FUTURE POLE MOUNTED SECURITY LIGHTING) PER FUTURE SPORTS LIGHTING POLE LOCATION. CONDUITS TO BE ROUTED TO CONCESSION STAND AND STUBBED UP AND CAPPED NEAR CONDUITS FOR SPORTS LIGHTING POLES THAT ARE IN SCOPE.

E103 SOUTHERN BASEBALL/SOFTBALL FIELD(S)SPORTS LIGHTING POLES HAVE BEEN REMOVED FROM PROJECT SCOPE. CONTRACTOR TO PROVIDE PROVISIONS FOR FUTURE SPORTS LIGHTING POLES AT SOUTHERN BASEBALL/SOFTBALL FIELD(S). PROVIDE (1) HAND HOLE AND (1) 1" CONDUIT WITH PULL STRING PER FUTURE SPORTS LIGHTING POLE LOCATION. CONDUITS TO BE ROUTED TO CONCESSION STAND AND STUBBED UP AND CAPPED NEAR CONDUITS FOR SPORTS LIGHTING POLES THAT ARE IN SCOPE.

DLR Group

STATE OF MISSOURI
CURTIS A. OLDS
NUMBER PE-2018036640
PROFESSIONAL ENGINEER
Jan 18 2021
CURTIS A. OLDS
LICENSE # PE-2018036640

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EXPIRES 12/31/2021

LEE'S SUMMIT MIDDLE SCHOOL #4

LEE'S SUMMIT R-7 SCHOOL DISTRICT

1001 SE BAILEY ROAD
LEE'S SUMMIT, MO 64081

PACKAGE 3 - BUILDING & SITE

10/08/20

REVISIONS

1	ADDENDUM 002	10/19/20
2	PR 004	1/18/21

13-20102-00

ELECTRICAL SITE PLAN - AREA 1

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
01/26/2021
Mike Weisenborn Digitally signed by Mike Weisenborn Date: 2021.01.26 10:27:52-06'00'

E1.01

CURTIS A. OLDS

1 ELECTRICAL SITE PLAN - AREA 2
1" = 40'-0"

VOLTAGE DROP CALCULATIONS - SITE LIGHTING

PNL-CKT	Identification		Source Pole	Conduit Type P or S	Conductor Material CU or AL	No. of Sets	Wire Size (Phase)	Voltage	Phase	Circuit Length (Feet)	Power Factor (PF)	Circuit Load (Amps)	Branch Voltage Drop (Volts)	Cumulative Voltage Drop (%)
	Pole	Fixture												
2H1C-12	P1	To S5	-	P	CU	1	8	277	1	200	0.95	8.538	2.586	0.934%
2H1C-12	P2	To S4-2	P1	P	CU	1	8	277	1	80	0.95	2.732	0.331	1.053%
2H1C-12	P3	To S4-2	P2	P	CU	1	8	277	1	90	0.95	2.049	0.279	1.154%
2H1C-12	P4	To S4-2	P3	P	CU	1	8	277	1	105	0.95	1.366	0.217	1.232%
2H1C-12	P5	To S4-2	P4	P	CU	1	8	277	1	80	0.95	0.683	0.083	1.262%
2H1C-12	P6	To S5	P1	P	CU	1	8	277	1	70	0.95	2.732	0.290	1.038%
2H1C-12	P7	To S4-2	P6	P	CU	1	8	277	1	140	0.95	2.391	0.507	1.221%
2H1C-12	P8	To S4-2	P7	P	CU	1	8	277	1	120	0.95	1.708	0.310	1.333%
2H1C-12	P9	To S5	P8	P	CU	1	8	277	1	140	0.95	1.025	0.217	1.412%
2H1C-12	P10	To S3	P9	P	CU	1	8	277	1	75	0.95	0.683	0.078	1.440%
2H1C-12	P11	To S3	P10	P	CU	1	8	277	1	85	0.95	0.342	0.044	1.455%
2H1C-12	P12	To S5	P6	P	CU	1	8	277	1	60	0.95	2.732	0.248	1.128%
2H1C-12	P13	To S4-2	P12	P	CU	1	8	277	1	80	0.95	2.391	0.290	1.232%
2H1C-12	P14	To S4-2	P13	P	CU	1	8	277	1	130	0.95	1.708	0.336	1.354%
2H1C-12	P15	To S4-2	P14	P	CU	1	8	277	1	130	0.95	1.025	0.202	1.427%
2H1C-12	P16	To S5	P15	P	CU	1	8	277	1	100	0.95	0.342	0.052	1.445%
2H1C-14	P17	To S5	-	P	CU	1	8	277	1	395	0.95	9.221	5.516	1.995%
2H1C-14	P18	To S4-2	P17	P	CU	1	8	277	1	145	0.95	2.391	0.525	2.185%
2H1C-14	P19	To S4-2	P18	P	CU	1	8	277	1	120	0.95	1.708	0.310	2.297%
2H1C-14	P20	To S4-2	P19	P	CU	1	8	277	1	135	0.95	1.025	0.209	2.372%
2H1C-14	P21	To S5	P20	P	CU	1	8	277	1	85	0.95	0.342	0.044	2.388%
2H1C-14	P22	To S5	P17	P	CU	1	8	277	1	65	0.95	3.415	0.336	2.116%
2H1C-14	P23	To S4-2	P22	P	CU	1	8	277	1	80	0.95	3.074	0.372	2.251%
2H1C-14	P24	To S4-2	P23	P	CU	1	8	277	1	125	0.95	2.391	0.453	2.414%
2H1C-14	P25	To S4-2	P24	P	CU	1	8	277	1	125	0.95	1.708	0.323	2.531%
2H1C-14	P26	To S4-2	P25	P	CU	1	8	277	1	135	0.95	1.025	0.209	2.607%
2H1C-14	P27	To S5	P26	P	CU	1	8	277	1	75	0.95	0.342	0.039	2.621%
2H1C-14	P28	To S5	P22	P	CU	1	8	277	1	55	0.95	3.074	0.256	2.209%
2H1C-14	P29	To S5	P28	P	CU	1	8	277	1	95	0.95	2.732	0.393	2.351%
2H1C-14	P30	To S5	P29	P	CU	1	8	277	1	65	0.95	2.391	0.235	2.436%
2H1C-14	P31	To S5	P30	P	CU	1	8	277	1	65	0.95	2.049	0.202	2.509%
2H1C-14	P32	To S5	P31	P	CU	1	8	277	1	65	0.95	1.708	0.168	2.569%
2H1C-14	P33	To S5	P32	P	CU	1	8	277	1	65	0.95	1.366	0.134	2.618%
2H1C-14	P34	To S5	P33	P	CU	1	8	277	1	65	0.95	1.025	0.101	2.654%
2H1C-14	P35	To S5	P34	P	CU	1	8	277	1	95	0.95	0.683	0.098	2.690%
2H1C-14	P36	To S5	P35	P	CU	1	8	277	1	50	0.95	0.342	0.026	2.699%
1H1E-33	P37	To S3	-	P	CU	1	8	277	1	125	0.95	4.781	0.905	0.330%
1H1E-33	P38	To S3	P37	P	CU	1	8	277	1	100	0.95	1.025	0.155	0.387%
1H1E-33	P39	To S2	P38	P	CU	1	8	277	1	140	0.95	0.683	0.145	0.439%
1H1E-33	P40	To S2	P39	P	CU	1	8	277	1	125	0.95	0.342	0.065	0.462%
1H1E-33	P41	To S2	P37	P	CU	1	8	277	1	145	0.95	0.683	0.150	0.385%
1H1E-33	P42	To S2	P41	P	CU	1	8	277	1	125	0.95	0.342	0.065	0.408%
1H1E-33	P43	To S4-2	P37	P	CU	1	8	277	1	80	0.95	2.732	0.331	0.450%
1H1E-33	P44	To S4-2	P43	P	CU	1	8	277	1	70	0.95	2.049	0.217	0.528%
1H1E-33	P45	To S4-2	P44	P	CU	1	8	277	1	70	0.95	1.366	0.145	0.581%
1H1E-33	P46	To S4-2	P45	P	CU	1	8	277	1	70	0.95	0.683	0.072	0.607%
2H1C-16	P47	To S2	-	P	CU	1	8	277	1	605	0.95	3.415	3.129	1.133%
2H1C-16	P48	To S2	P47	P	CU	1	8	277	1	220	0.95	1.025	0.341	1.257%
2H1C-16	P49	To S2	P48	P	CU	1	8	277	1	215	0.95	0.683	0.222	1.337%
2H1C-16	P50	To S2	P49	P	CU	1	8	277	1	235	0.95	0.342	0.122	1.381%
2H1C-16	P51	To S2	P47	P	CU	1	8	277	1	280	0.95	2.049	0.869	1.447%
2H1C-16	P52	To S2	P51	P	CU	1	8	277	1	300	0.95	1.708	0.776	1.727%
2H1C-16	P53	To S2	P52	P	CU	1	8	277	1	205	0.95	1.366	0.424	1.880%
2H1C-16	P54	To S2	P53	P	CU	1	8	277	1	165	0.95	1.025	0.256	1.973%
2H1C-16	P55	To S2	P54	P	CU	1	8	277	1	200	0.95	0.683	0.207	2.047%
2H1C-16	P56	To S2	P55	P	CU	1	8	277	1	150	0.95	0.342	0.078	2.075%
2H1C-18	P57	To SP	-	P	CU	1	8	277	1	215	0.95	1.894	0.604	0.222%
2H1C-18	P58	To SP	P57	P	CU	1	8	277	1	80	0.95	0.421	0.050	0.240%
2H1C-18	P59	To SP	P58	P	CU	1	8	277	1	620	0.95	0.210	0.193	0.309%
2H1C-18	P60	To SP	P57	P	CU	1	8	277	1	80	0.95	1.263	0.150	0.276%
2H1C-18	P61	To SP	P60	P	CU	1	8	277	1	110	0.95	1.052	0.172	0.338%
2H1C-18	P62	To SP	P61	P	CU	1	8	277	1	130	0.95	0.842	0.162	0.396%
2H1C-18	P63	To SP	P62	P	CU	1	8	277	1	390	0.95	0.631	0.365	0.528%
2H1C-18	P64	To SP	P63	P	CU	1	8	277	1	80	0.95	0.421	0.050	0.546%
2H1C-18	P65	To SP	P64	P	CU	1	8	277	1	85	0.95	0.210	0.027	0.555%
2H1C-18	P65A	To SP	P65	P	CU	1	8	277	1	80	0.95	0.421	0.050	0.574%
2H1C-18	P65B	To SP	P65A	P	CU	1	8	277	1	85	0.95	0.631	0.080	0.602%
2H1A-10	P66	To S2	-	P	CU	1	8	277	1	1	0.95	2.049	0.003	0.005%
2H1A-10	P67	To S2	P66	P	CU	1	8	277	1	205	0.95	1.708	0.519	0.192%
2H1A-10	P68	To S2	P67	P	CU	1	8	277	1	205	0.95	1.366	0.415	0.342%
2H1A-10	P69	To S2	P68	P	CU	1	8	277	1	175	0.95	1.025	0.266	0.438%
2H1A-10	P70	To S2	P69	P	CU	1	8	277	1	180	0.95	0.683	0.182	0.504%
2H1A-10	P71	To S2	P70	P	CU	1	8	277	1	245	0.95	0.342	0.124	0.548%
2H1C-20	P80	To SF	-	P	CU	1	8	277	1	200	0.95	0.375	0.111	0.044%
Typ Run	-	S3/S5 Fixture	-	P	CU	1	8	277	1	20	0.95	0.342	0.010	0.004%
Typ Run	-	S4-2 Fixture	-	P	CU	1	8	277	1	20	0.95	0.683	0.021	0.007%

POLE/MOUNTING HEIGHTS

FIXTURE	HEIGHT
SP	+12'-0"
S2	+20'-0"
S3	+20'-0"
S4	+20'-0"
S4-2	+20'-0"
S5	+20'-0"
W1,W1E	+12'-0"
W2,W2E	+12'-0"
W8,W8E	CANOPY CEILING MOUNTED
W16,W16E	VERTICAL WALL MOUNTING
WW	19'-7"

NOTE: THE ABOVE HEIGHTS ARE TYPICAL PER FIXTURE UNLESS NOTED OTHERWISE ON PLANS.

ELECTRCAL SHEET NOTES:

P# = SITE LIGHTING POLE DESIGNATION FOR VOLTAGE DROP CALCULATIONS ON THIS SHEET.

1. COORDINATE EXACT POLE LOCATION WITH ARCHITECT, CIVIL, AND LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
2. UNDERGROUND CONDUIT ROUTING SHOWN FOR REFERENCE AND VOLTAGE DROP CALCULATIONS. COORDINATE EXACT ROUTING WITH OTHER UTILITIES, TREES, AND OTHER OBSTACLES. IF ROUTING DIFFERS FROM SHOWN, PROVIDE REVISED VOLTAGE DROP CALCULATIONS FOR REVIEW PRIOR TO INSTALLATION.

SITE LIGHTING CIRCUIT LEGEND

(E) # INDICATES NUMBER OF CIRCUITS IN A CONDUIT
_ INDICATES CIRCUIT(S) CONDUCTOR(S) SIZE AND CONFIGURATION

(1) 1-1/2" PVC CONDUIT WITH PULLSTRING FOR FUTURE

(2) (3) 2" PVC CONDUIT WITH PULLSTRING FOR FUTURE

(1A) 1-1/2" PVC CONDUIT WITH (2) #8 THWN CU. & (1) #8 GND.

(2A) 1-1/2" PVC CONDUIT WITH (4) #8 THWN CU & (1) #8 GND.

ELECTRICAL PLAN NOTES:

E100 FLAG POLE SPOT LIGHTING TO BE MOUNTED IN LANDSCAPING ON TOP OF IN-GRADE ELECTRICAL JUNCTION BOX. COORDINATE INSTALLATION REQUIREMENTS WITH MANUFACTURER'S SPECIFICATIONS. COORDINATE EXACT LOCATION OF FLAGPOLES AND LOCATION OF WITH ARCHITECTURAL AND LANDSCAPING PLANS PRIOR TO INSTALLATION.

2 E102 SOUTHERN BASEBALL/SOFTBALL FIELD(S)SPORTS LIGHTING POLES HAVE BEEN REMOVED FROM PROJECT SCOPE. CONTRACTOR TO PROVIDE PROVISIONS FOR FUTURE SPORTS LIGHTING POLES AT SOUTHERN BASEBALL/SOFTBALL FIELD(S). PROVIDE (1) HAND HOLE, (1) 1" CONDUIT WITH PULL STRING AND (1) 3/4" CONDUIT WITH PULL STRING (FOR FUTURE POLE MOUNTED SECURITY LIGHTING) PER FUTURE SPORTS LIGHTING POLE LOCATION. CONDUITS TO BE ROUTED TO CONCESSION STAND AND STUBBED UP AND CAPPED NEAR CONDUITS FOR SPORTS LIGHTING POLES THAT ARE IN SCOPE.

E103 SOUTHERN BASEBALL/SOFTBALL FIELD(S)SPORTS LIGHTING POLES HAVE BEEN REMOVED FROM PROJECT SCOPE. CONTRACTOR TO PROVIDE PROVISIONS FOR FUTURE SPORTS LIGHTING POLES AT SOUTHERN BASEBALL/SOFTBALL FIELD(S). PROVIDE (1) HAND HOLE AND (1) 1" CONDUIT WITH PULL STRING PER FUTURE SPORTS LIGHTING POLE LOCATION. CONDUITS TO BE ROUTED TO CONCESSION STAND AND STUBBED UP AND CAPPED NEAR CONDUITS FOR SPORTS LIGHTING POLES THAT ARE IN SCOPE.

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

01/26/2021

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Missouri State Certificate of Authority #000939

STATE OF MISSOURI
CURTIS A. OLDS
NUMBER PE-2018036640
PROFESSIONAL ENGINEER

Jan 18 2021
CURTIS A. OLDS
LICENSE # PE-2018036640

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MO. CERTIFICATE OF AUTHORITY NO. E-5360
EXPIRES 12/31/2021

LEE'S SUMMIT MIDDLE SCHOOL #4
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1001 SE BAILEY ROAD
LEE'S SUMMIT, MO 64081

PACKAGE 3 - BUILDING & SITE
10/08/20
REVISIONS
1 ADDENDUM 002 10/19/20
2 PR 004 1/18/21

13-20102-00

ELECTRICAL SITE PLAN - AREA 2

E1.02

CURTIS A. OLDS

PANELBOARD: H1S (NEW)

BUS AMPS: 600A
MAIN SIZE/TYPE: 600A M.C.B.
VOLTS/PHASE: 480Y/277 V 3P/4W
SUPPLIED BY: UTILITY

WAREHOUSE
SERVICE SQUARE FOOTAGE: 1

FAULT CURRENT: RE: ONE-LINE DIAGRAM
AIC RATED: FULLY RATED
AIC RATING: FCA +10% MINIMUM
SERVES: CONCESSIONS/ATHLETICS
MOUNTING: SURFACE
LOCATION: ELECTRICAL S101

EQUIPMENT GROUND BUS

SERVICE ENTRANCE RATED

LINE-SIDE LUGS: MECHANICAL

CKT NO.	DESCRIPTION	LOAD TYPE	NOTES	WIRE SIZE	BKR AMP	P	PHASE A	PHASE B	PHASE C	P	BKR AMP	WIRE SIZE	NOTES	LOAD TYPE	DESCRIPTION	CKT NO.
1							1295 1930									2
3	POLE SA1	L		SC	20	3		1295 1930		3	20	SC		L	POLE SA5 (FUTURE)	4
5									1295 1930							6
7							1295 1930									8
9	POLE SA2	L		SC	20	3		1295 1930		3	20	SC		L	POLE SA6 (FUTURE)	10
11									1295 1930							12
13							2358 3358									14
15	POLE SB1	L		SC	20	3		2358 3358		3	25	SC		L	POLE SB5 (FUTURE)	16
17									2358 3358							18
19							2358 3358									20
21	POLE SB2	L		SC	20	3		2358 3358		3	25	SC		L	POLE SB6 (FUTURE)	22
23									2358 3358							24
25							1930 2520									26
27	POLE SA3	L		SC	20	3		1930 2520		3	20	SC		L	POLE SC3 (FUTURE)	28
29									1930 2520							30
31							1930 2520									32
33	POLE SA4	L		SC	20	3		1930 2520		3	20	SC		L	POLE SC4 (FUTURE)	34
35									1930 2520							36
37							3883 1930									38
39	POLE SB3	L		SC	25	3		3883 1930		3	20	SC		L	POLE SA7 (FUTURE)	40
41									3883 1930							42
43							4407 1930									44
45	POLE SB4	L		SC	30	3		4407 1930		3	20	SC		L	POLE SA8 (FUTURE)	46
47									4407 1930							48
49							3568 3358									50
51	POLE SC1	L		SC	25	3		3568 3358		3	25	SC		L	POLE SB7 (FUTURE)	52
53									3568 3358							54
55							3568 3358									56
57	POLE SC2	L		SC	25	3		3568 3358		3	25	SC		L	POLE SB8 (FUTURE)	58
59									3568 3358							60
61							0 2520									62
63	SPARE				20	3		0 2520		3	20	SC		L	POLE SC5 (FUTURE)	64
65									0 2520							66
67							0 2520									68
69	SPARE				25	3		0 2520		3	20	SC		L	POLE SC6 (FUTURE)	70
71									0 2520							72
73							0 607									74
75	SPARE				30	3		0 607		3	20	8		Z	Z1 SECURITY FIXTURES	76
77									0 607						POLES: SA1 thru SA4, SB3, SB4	78
79	EQUIPPED SPACE					1	0 0			1					SPARE	80
81	EQUIPPED SPACE					1		0 0		1					EQUIPPED SPACE	82
83	EQUIPPED SPACE					1			0 0	1					EQUIPPED SPACE	84
85	LTS - CONCESSIONS	L Z		12	20	1	1830 0			1	20				SPARE	86
87	LTS - CONCESSION EXTERIOR	L		12	20	1		489 0		1	20				SPARE	88
89									1667 0	1	20				SPARE	90
91	EUH-1	H		12	15	3	1667 0			1	20				SPARE	92
93								1667 0		1	20				SPARE	94
95	EUH-2	H		12	15	1			3000 0	1	20				SPARE	96
97	EUH-3A	H		12	15	1	3000 0			1	20				SPARE	98
99	EUH-3B	H		12	15	1		3000 0		1	20				SPARE	100
101	EUH-4	H		12	15	1			3000 0	1	20				SPARE	102
103							2333 0			1	20				SPARE	104
105	EUH-5	H		12	15	3		2333 0		1	20				SPARE	106
107									2333 0	1	20				SPARE	108
109	EUH-6	H		12	15	1	3000 0			1	20				SPARE	110
111								2333 0		1	20				SPARE	112
113	EUH-7	H		12	15	3			2333 0	1	20				SPARE	114
115							2333 0			1	20				SPARE	116
117	EUH-8	H		12	15	1		3000 0		1	20				SPARE	118
119									2333 0	1	20				SPARE	120
121	EUH-9	H		12	15	3	2333 0			1	20				SPARE	122
123								2333 0		1	20				SPARE	124
125	EUH-10	H		12	15	1			3000 0	1	20				SPARE	126
127							6000 0			1	20				SPARE	128
129	WH11	U		10	30	3		6000 0		1	20				SPARE	130
131									6000 0	1	20				SPARE	132
133	SPARE				20	1	0 0			1	20				SPARE	134
135	SPARE				20	1		0 0		1	20				SPARE	136
137	SPARE				20	1			0 0	1	20				SPARE	138
139	SPARE				20	1	0 0			1	20				SPARE	140
141	SPARE				20	1		0 0		1	20				SPARE	142
143	SPARE				20	1			0 0	1	20				SPARE	144
145	SPARE				20	1	0 0			1	20				SPARE	146
147	SPARE				20	1		0 0		1	20				SPARE	148
149	EQUIPPED SPACE					1			0 0	1	20				SPARE	150
151	EQUIPPED SPACE					1	0 0			1	20				SPARE	152
153	EQUIPPED SPACE					1		0 0		1	20				SPARE	154
155	EQUIPPED SPACE					1			0 0	1	20				SPARE	156
157	EQUIPPED SPACE					1	0 2933									158
159	EQUIPPED SPACE					1		0 2933		3	20	10		Z	IRRIGIATION PUMP (7.5HP, 600')	160
161	EQUIPPED SPACE					1			0 2933							162
163	EQUIPPED SPACE					1	0 9834									164
165	EQUIPPED SPACE					1		0 8674		3	125	OL		--	TX-L1S	166
167	EQUIPPED SPACE					1			0 14007							168
							TOTAL LOAD (VA):	93697 VA	91196 VA	99041 VA						
							TOTAL AMPS:	340 A	329 A	359 A						

LOAD TYPE	CONNECTED LOAD	DEMAND FACTOR	NEC DEMAND	PANELBOARD NOTES
EXISTING LOAD (E)	0 VA	100%	0 VA	
COOLING (C)	2288 VA	0%	0 VA	
HEATING (H)	47000 VA	100%	47000 VA	
LIGHTING (L) (PER NEC-220)	176836 VA	125%	221045 VA	
RECEPTACLES (R)	22560 VA	72%	16280 VA	
MOTORS (M)	258 VA	100%	258 VA	
SUPPLEMENTAL HEAT (U)	18000 VA	100%	18000 VA	
MISC EQUIP (Z)	12365 VA	100%	12365 VA	
REFRIGERATION (F)	0 VA	100%	0 VA	
SIGN/DISPLAY (D)	2400 VA	125%	3000 VA	
KITCHEN (K)	1000 VA	100%	1000 VA	
LARGEST MOTOR	830 VA	125%	1038 VA	
SHOW WINDOW (W)	0 VA	125%	0 VA	
TRACK LIGHTING	0 VA	100%	0 VA	

PANELBOARD TOTALS	
TOTAL CONNECTED LOAD	283537 VA
TOTAL NEC LOAD	319986 VA
TOTAL CONNECTED CURRENT	341 A
TOTAL NEC DEMAND CURRENT	385 A

PANELBOARD: L1S (NEW)

BUS AMPS: 225A
MAIN SIZE/TYPE: 225A M.C.B.
VOLTS/PHASE: 208Y/120 V 3P/4W
SUPPLIED BY: H1S VIA TX-L1S

FAULT CURRENT: RE: ONE-LINE DIAGRAM
AIC RATED: FULLY RATED
AIC RATING: FCA +10% MINIMUM
SERVES: CONCESSIONS/DUGOUTS
MOUNTING: SURFACE
LOCATION: ELECTRICAL S101

EQUIPMENT GROUND BUS

LINE-SIDE LUGS: MECHANICAL

CKT NO.	DESCRIPTION	LOAD TYPE	NOTES	WIRE SIZE	BKR AMP	P	PHASE A	PHASE B	PHASE C	P	BKR AMP	WIRE SIZE	NOTES	LOAD TYPE	DESCRIPTION	CKT NO.
1	RCPT - RESTROOMS	R		12	20	1	540 0			1	20				SPARE	2
3	RCPT - LOCKER ROOMS	R		12	20	1		540 0		1	20				SPARE	4
5	RCPT - LOCKER RESTROOMS	R		12	20	1			720 0	1	20				SPARE	6
7	RCPT - CONV. OFFICE	R		12	20	1	540 0			1	20				SPARE	8
9	RCPT - ICE MAKER	K		12	20	1		1000 0		1	20				SPARE	10
11	RCPT - CONV. ELECTRICAL	R		12	20	1			180 0	1	20				SPARE	12
13	RCPT - CONV. MECHANICAL	R		12	20	1	180 0			1	20				SPARE	14
15	RCPT - OFFICE	R		12	20	1		720 0		1	20				SPARE	16
17	RCPT CONV. CONCESSIONS	R		12	20	1			720 0	1	20				SPARE	18
19	RCPT - EXTERIOR	R		12	20	1	360 0			1	20				SPARE	20
21	RCPT - STORAGE	R		12	20	1		360 0		1	20				SPARE	22
23	RCPT - CONCESSIONS	R		12	20	1			360 0	1	20				SPARE	24
25	RCPT - CONCESSIONS	R		12	20	1	360 0			1	20				SPARE	26
27	RCPT - CONCESSIONS	R		12	20	1		360 0		1	20				SPARE	28
29	RCPT - CONCESSIONS	R		12	20	1			360 0	1	20				SPARE	30
31	RCPT - CONCESSIONS	R		12	20	1	360 0			1	20				SPARE	32
33	PWR-SECURITY PANEL			12	20	1		400 0		1	20				SPARE	34
35	MISC EQUIP	Z			20	1			100 0	1	20				SPARE	36
37	PWR - DOOR HARDWARE (S101/102/108)	Z		12	20	1	150 0			1	20				SPARE	38
39	PWR - DOOR HARDWARE (S102A/S108A)	Z		12	20	1		100 0		1	20				SPARE	40
41	PWR - DOOR HARDWARE (S111A/S112)	Z		12	20	1			100 0	1	20				SPARE	42
43	RCPT - EXT EWC	R		12	20	1	360 0			1	20				SPARE	44
45	RCPT - CHARGERS (N)	R		12	20	1		360 0		1	20				SPARE	46
47	RCPT - CHARGERS (S)	R		12	20	1			360 0	1	20				SPARE	48
49	CU-14/CR-14	C		12	20	2	1144 0			1	20				SPARE	50
51								1144 0		1	20				SPARE	52
53	EF-23	M		12	15	1			830 0	1	20				SPARE	54
55	EF-24	M		12	15	1	100 0			1	20				SPARE	56
57	TF-2	M		12	15	1		100 0		1	20				SPARE	58
59	RP6/TS1	M		12	15	1			58 0	1	20				SPARE	60
61	RCPT - IRRIGATION CONTROLLER	R		12	20	1	180 254									62
63	PWR-MOTORIZED DAMPER	Z		12	20	1		50 360		3	60	OL		L R	LC1	64
65	SPARE				20	1			0 1800							66
67	SPARE				20	1	0 3286									68
69	SPARE				20	1		0 1860		3	60	OL		L R	LC2	70
71	SPARE				20	1			0 3300							72
73	MONUMENT SIGNAGE (WEST)	D		6	20	1	1200 466									74
75	FIBER CONVERTER (SIGN WEST)	Z		10	20	1		100 360		3	60	OL		L R	LC3	76
77	MONUMENT SIGNAGE (EAST)	D		6	20	1			1200 1620							78
79	FIBER CONVERTER (SIGN EAST)	Z		10	20	1	100 254									80
81	MUSCO LIGHTING - CONTROL POWER	Z		12	20	1		500 360		3	60	OL		L R	LC4	82
83	MUSCO LIGHTING - COMMUNICATIONS	Z		12	20	1			500 1800							84
							TOTAL LOAD (VA):	9834 VA	8674 VA	14007 VA						
							TOTAL AMPS:	83 A	72 A	118 A						

LOAD TYPE	CONNECTED LOAD	DEMAND FACTOR	NEC DEMAND	PANELBOARD NOTES
EXISTING LOAD (E)	0 VA	100%	0 VA	
COOLING (C)	2288 VA	0%	0 VA	
HEATING (H)	0 VA	0%	0 VA	
LIGHTING (L)	1080 VA	125%	1350 VA	
RECEPTACLES (R)	22560 VA	72%	16280 VA	
MOTORS (M)	258 VA	100%	258 VA	
SUPPLEMENTAL HEAT (U)	0 VA	100%	0 VA	
MISC EQUIP (Z)	1700 VA	100%	1700 VA	
REFRIGERATION (F)	0 VA	100%	0 VA	
SIGN/DISPLAY (D)	2400 VA	125%	3000 VA	
KITCHEN (K)	1000 VA	100%	1000 VA	
LARGEST MOTOR	830 VA	125%	1038 VA	
SHOW WINDOW (W)	0 VA	125%	0 VA	
TRACK LIGHTING	0 VA	100%	0 VA	

PANELBOARD TOTALS	
TOTAL CONNECTED LOAD	32116 VA
TOTAL NEC LOAD	26914 VA
TOTAL CONNECTED CURRENT	89 A
TOTAL NEC DEMAND CURRENT	75 A

PANELBOARD: 1L1T (NEW)

BUS AMPS: 100A
MAIN SIZE/TYPE: 100A M.C.B.
VOLTS/PHASE: 208Y/120 V 3P/4W
SUPPLIED BY: SWBD-N1 VIA TX-1L1T

FAULT CURRENT: RE: ONE-LINE DIAGRAM
AIC RATED: FULLY RATED
AIC RATING: FCA +10% MINIMUM
SERVES: STORAGE BUILDING
MOUNTING: SURFACE
LOCATION:

EQUIPMENT GROUND BUS

LINE-SIDE LUGS: MECHANICAL

CKT NO.	DESCRIPTION	LOAD TYPE	NOTES	WIRE SIZE	BKR AMP	P	PHASE A	PHASE B	PHASE C	P	BKR AMP	WIRE SIZE	NOTES	LOAD TYPE	DESCRIPTION	CKT NO.
1	LTG - STORAGE BUILDING	L		12	20	1	323 360			1	20	6		R	RCPT - SCOREBOARD CONTRLLR	2
3	RCPT - STORAGE AREA T	R		12	20	1		360 1000		1	20	10		Z	SCOREBOARD	4
5	SPARE				20	1			0 0	1	20				SPARE	6
7	SPARE				20	1	0 0			1	20				SPARE	8
9	SPARE				20	1		0 0		1	20				SPARE	10
11	SPARE				20	1			0 0	1	20				SPARE	12
13	SPARE				20	1	0 0			1	20				SPARE	14
15	SPARE				20	1		0 0		1	20				SPARE	16
17	SPARE				20	1			0 0	1	20				SPARE	18
19	SPARE				20	1	0 0			1	20				SPARE	20
21	SPARE				20	1		0 0		1	20				SPARE	22
23	SPARE				20	1			0 0	1	20				SPARE	24
25	SPARE				20	1	0 0			1	20				SPARE	26
27	SPARE				20	1		0 0		1	20				SPARE	28
29	SPARE				20	1			0 0	1	20				SPARE	30
31	SPARE				20	1	0 0			1	20				SPARE	32
33	SPARE				20	1		0 0		1	20				SPARE	34
35	SPARE				20	1			0 0	1	20				SPARE	36
37	SPARE				20	1	0 0			1	20				SPARE	38
39	SPARE				20	1		0 0		1	20				SPARE	40
41	SPARE				20	1			0 0	1	20				SPARE	42
							TOTAL LOAD (VA):	683 VA	1360 VA	0 VA						
							TOTAL AMPS:	7 A	12 A	0 A						

LOAD TYPE	CONNECTED LOAD	DEMAND FACTOR	NEC DEMAND	PANELBOARD NOTES
EXISTING LOAD (E)	0 VA	100%	0 VA	
COOLING (C)	0 VA	0%	0 VA	
HEATING (H)	0 VA	100%	0 VA	
LIGHTING (L)	323 VA	125%	404 VA	
RECEPTACLES (R)	720 VA	100%	720 VA	
MOTORS (M)	0 VA	100%	0 VA	
SUPPLEMENTAL HEAT (U)	0 VA	100%	0 VA	
MISC EQUIP (Z)	1000 VA	100%	1000 VA	
REFRIGERATION (F)	0 VA	100%	0 VA	
SIGN/DISPLAY (D)	0 VA	125%	0 VA	
KITCHEN (K)	0 VA	100%	0 VA	
LARGEST MOTOR	0 VA	125%	0 VA	
SHOW WINDOW (W)	0 VA	125%	0 VA	
TRACK LIGHTING	0 VA	100%	0 VA	

PANELBOARD TOTALS	
TOTAL CONNECTED LOAD	2043 VA
TOTAL NEC LOAD	2124 VA
TOTAL CONNECTED CURRENT	6 A
TOTAL NEC DEMAND CURRENT	6 A

PANELBOARD SCHEDULE NOTES LEGEND:

AF = ARC FAULT CIRCUIT INTERRUPTER.
C# = CIRCUIT VIA LIGHTING CONTACTOR #.
CL = CIRCUIT VIA CURRENT LIMITING DEVICE.
EM = EMERGENCY LIGHTING HANDLE-ON CLAMP.
ETR = EXISTING TO REMAIN
FA = RED/HANDLE-ON CLAMP.
GF = GROUND-FAULT CIRCUIT INTERRUPTER TYPE CIRCUIT BREAKER (5 mA).
GFEP = GROUND FAULT EQUIPMENT PROTECTION BREAKER (30 mA).
HT# = PROVIDE HANDLE-TIE FOR MULTI-WIRE BRANCH CIRCUIT PER CODE. # DENOTES PHASES TO BE TIED.
IG = ISOLATED GROUND CIRCUIT.
L# = LIGHTING CONTROL SCHEME NUMBER.
LCK = HANDLE PADLOCKABLE-OFF DEVICE.
LO = HANDLE-ON CLAMP.
N = PROVIDE NEUTRAL WITH 208V OR 480V, 1-PH OR 3-PH CIRCUIT.
NB = PROVIDE NEW CIRCUIT BREAKER.
O/OL = REFER TO ELECTRICAL ONE-LINE/RISER DIAGRAM.
PS = POWER-SWITCHING CIRCUIT BREAKER.
PSE = EMERGENCY POWER-SWITCHING CIRCUIT BREAKER.
RP = CIRCUIT VIA RELAY PANEL.
SC = REFER TO VOLTAGE DROP CALCULATION SCHEDULE FOR MINIMUM WIRE SIZE.
ST = SHUNT TRIP CIRCUIT BREAKER.
VD = BRANCH CIRCUITRY HAS BEEN UPSIZED TO REDUCE VOLTAGE DROP. ADJUST GROUND WIRE SIZE PER CODE. PROVIDE LUG ADAPTORS IF REQUIRED.

PANEL H1S | PANEL L1S | PANEL 1L1T

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STATE OF MISSOURI
CURTIS A. OLDS
NUMBER PE-2010036640
PROFESSIONAL ENGINEER

Jan 18 2021
CURTIS A. OLDS
LICENSE # PE-2010036640

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EXPIRES 12/31/2021

LEE'S SUMMIT MIDDLE SCHOOL #4

LEE'S SUMMIT R-7 SCHOOL DISTRICT

1001 SE BAILEY ROAD
LEE'S SUMMIT, MO 64081

PACKAGE 3 - BUILDING & SITE
10/08/20

REVISIONS

1	ADDENDUM 001	10/13/20
2	ADDENDUM 002	10/19/20
3	PR 001	11/11/20
4	PR 004	1/18/21

13-20102-00

ELECTRICAL SCHEDULES

E6.12

CURTIS A. OLDS

EXTERIOR LIGHT FIXTURE SCHEDULE

TYPE	MANUFACTURER / MODEL #	ALTERNATES	LAMPING / LIGHT SOURCE	DIMMING TYPE	VOLTAGE	INPUT VA	DESCRIPTION	NOTES
SP	CREE LIGHTING OSQ-DA-BZ + OSQ-A-NM-2ME-Z-40K-UH-BZ	LITHONIA LIGHTING - DSX0 LED SERIES	LED 4000K 70CRI 6,896 LUMENS	0-10V	480V	53	SINGLE-HEAD, DARK-SKY-FRIENDLY PEDESTRIAN POLE LIGHT WITH TYPE 2 DISTRIBUTION, MOUNTED AT 12.5'.	
S2	CREE LIGHTING OSQ-DA-BZ + OSQ-A-NM-2ME-B-40K-UH-BZ	LITHONIA LIGHTING - DSX0 LED SERIES McGRAW EDISON GALLEON SERIES	LED 4000K 70CRI 11,424 LUMENS	0-10V	480V	83	SINGLE-HEAD, DARK-SKY-FRIENDLY PARKING LOT POLE LIGHT WITH TYPE 2 DISTRIBUTION, MOUNTED AT 15' OR 20'	
S3	CREE LIGHTING OSQ-DA-BZ + OSQ-A-NM-3ME-B-40K-UH-BZ	LITHONIA LIGHTING - DSX0 LED SERIES McGRAW EDISON GALLEON SERIES	LED 4000K 70CRI 11,424 LUMENS	0-10V	480V	83	SINGLE-HEAD, DARK-SKY-FRIENDLY PARKING LOT POLE LIGHT WITH TYPE 3 DISTRIBUTION, MOUNTED AT 15' OR 20'	
S4	CREE LIGHTING OSQ-DA-BZ + OSQ-A-NM-4ME-B-40K-UH-BZ	LITHONIA LIGHTING - DSX0 LED SERIES McGRAW EDISON GALLEON SERIES	LED 4000K 70CRI 11,424 LUMENS	0-10V	480V	83	SINGLE-HEAD, DARK-SKY-FRIENDLY PARKING LOT POLE LIGHT WITH TYPE 4 DISTRIBUTION, MOUNTED AT 15' OR 20'	
S4-2	CREE LIGHTING OSQ-DA-BZ + OSQ-A-NM-4ME-B-40K-UH-BZ	LITHONIA LIGHTING - DSX0 LED SERIES McGRAW EDISON GALLEON SERIES	LED 4000K 70CRI 11,424 LUMENS (PER HEAD)	0-10V	480V	83	TWO-HEAD, DARK-SKY-FRIENDLY PARKING LOT POLE LIGHT WITH TYPE 4 DISTRIBUTION, MOUNTED AT 15' OR 20'	
S5	CREE LIGHTING OSQ-DA-BZ + OSQ-A-NM-5ME-B-40K-UH-BZ	LITHONIA LIGHTING - DSX0 LED SERIES McGRAW EDISON GALLEON SERIES	LED 4000K 70CRI 11,424 LUMENS	0-10V	480V	83	SINGLE-HEAD, DARK-SKY-FRIENDLY PARKING LOT POLE LIGHT WITH TYPE 5 DISTRIBUTION, MOUNTED AT 15' OR 20'	
WW	BEGA 44 419-K4-BRZ	LITON - WLP32 DEXTERO SERIES VISIONARE LIGHTING - VSC-II SERIES	LED 4000K 70CRI 1,399 LUMENS	0-10V	120-277V	36	LED WALL MOUNTED LINEAR GRAZER LUMINAIRE. WET LOCATION RATED FOR PROTECTION CLASS IP 65.	
W1 W1E	BEGA 24 816-K4-BRZ		LED 4000K 70CRI 6,674 LUMENS	0-10V	120-277V	61	LED WALL LUMINARE WITH ASYMETRICAL LIGHT DISTRIBUTION. WET LOCATION RATED FOR PROTECTION CLASS IP 65. WITH BATTERY BACK-UP	
W2 W2E	WE-EF OLV344 LED-{R65}(622-7723)-5903LM-48W-4000K-RAL9004 OLV344 LED-{R65}(622-7723)-5903LM-48W-4000K-RAL9004-EM622-7402	LITHONIA LIGHTING	LED 4000K 80CRI 5903LUMENS		120-277V	55	BLACK WALL MOUNTED WET LOCATION RATED TYPE 4 DISTRIBUTION LED BACK OF HOUSE LUMINAIRE WITH BATTERY BACK-UP	
W8 W8E	FOCAL POINT SEEM 4 FSM4LWL-FL-625LF-40K-1C-UNV-LD1-*CEILING*-WH-8 FSM4LWL-FL-625LF-40K-1C-UNV-LD1-*CEILING*-EM-WH-8	MARK ARCHITECTURAL LIGHTING	LED 4000K 80CRI 625 LUMENS/FT	0-10V	120-277V	7 VA/FT	4" X8' LINEAR RECESSED LED CEILING MOUNTED LUMINARE WITH SYMMETRIC LIGHT DISTRIBUTION. WET LOCATION RATED WITH BATTERY BACK UP	
W16 W16E	KELVIX CHANNEL: CH-013C-16FT-FR-RC-EC TAPE: DK41K-WR-24V REMOTE DRIVER: 277 TO 24V		LED 4000K 80CRI 440 LUMENS/FT		24V/ 277V LED DRIVER	5 VA/FT	LED TAPE LIGHT WITH 2" BY 16' LED CHANNEL WITH BATTERY REMOTE BATTERY BACK-UP	

GENERAL NOTES:

A. REFER TO LIGHT FIXTURE SCHEDULE GENERAL NOTES AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

SPORTS LIGHTING FIXTURE SCHEDULE

2

POLE GROUP FIXTURE TAG	QUANTITY	MANUFACTURER / MODEL #	LAMPING / LIGHT SOURCE	VOLTAGE	INPUT VA	TOTAL Watts	TOTAL Watts	DESCRIPTION	NOTES
SA1	1	MUSCO TLC-LED-1200 - MH: 60'	LED 5700K 75 CRI 136,000 LUMENS	480V 3-PHASE	1170	3925	4313	SPORTS LIGHTING	MUSCO TAGS A1
	2	MUSCO TLC-LED-900 - MH: 60'	LED 5700K 75 CRI 89,600 LUMENS	480V 3-PHASE	890			SPORTS LIGHTING	
	1	MUSCO TLC-BT-575 - MH: 16'	LED 5700K 75 CRI 52,000 LUMENS	480V 3-PHASE	575			SPORTS LIGHTING	
	1	MUSCO TLC-BT-400 - MH: 50'	LED 5700K 70 CRI 46,500 LUMENS	480V 3-PHASE	400			PUBLIC LIGHTING	
SA2	1	MUSCO TLC-LED-1200 - MH: 70'	LED 5700K 75 CRI 136,000 LUMENS	480V 3-PHASE	1170	3655	4016	SPORTS LIGHTING	MUSCO TAGS A2
	2	MUSCO TLC-LED-900 - MH: 60'	LED 5700K 75 CRI 52,000 LUMENS	480V 3-PHASE	890			SPORTS LIGHTING	
	1	MUSCO TLC-BT-575 - MH: 16'	LED 5700K 70 CRI 52,000 LUMENS	480V 1-PHASE	575			SPORTS LIGHTING	
	1	CREE OSQ - MH: 30'	LED 5700K 75 CRI 16,599 LUMENS	480V 3-PHASE	130			PUBLIC LIGHTING	
SA3	4	MUSCO TLC-LED-1200 - MH: 60'	LED 5700K 75 CRI 136,00 LUMENS	480V 3-PHASE	1170	5655	6214	SPORTS LIGHTING	MUSCO TAG A3
	1	MUSCO TLC-BT-575 - MH: 16'	LED 5700K 75 CRI 52,000 LUMENS	480V 3-PHASE	575			SPORTS LIGHTING	
	1	MUSCO TLC-BT-400 - MH: 50'	LED 5700K 70 CRI 46,500 LUMENS	480V 3-PHASE	400			SPORTS LIGHTING	
SA4	4	MUSCO TLC-LED-1200 - MH: 60'	LED 5700K 75 CRI 136,00 LUMENS	480V 3-PHASE	1170	5515	6060	SPORTS LIGHTING	MUSCO TAG A4
	1	MUSCO TLC-BT-575 - MH: 16'	LED 5700K 75 CRI 52,000 LUMENS	480V 3-PHASE	575			SPORTS LIGHTING	
	2	CREE OSQ - MH: 30'	LED 5700K 70 CRI 16,599 LUMENS	480V 1-PHASE	130			PUBLIC LIGHTING	
SB1, SB2	5	MUSCO TLC-LED-1200 - MH: 60'	LED 5700K 75 CRI 136,00 LUMENS	480V 3-PHASE	1170	6425	7060	SPORTS LIGHTING	MUSCO TAG B1,B2
	1	MUSCO TLC-BT-575 - MH: 16'	LED 5700K 75 CRI 52,000 LUMENS	480V 3-PHASE	575			SPORTS LIGHTING	
SB3	7	MUSCO TLC-LED-1500 - MH: 70'	LED 5700K 75 CRI 160,000 LUMENS	480V 3-PHASE	1430	10715	11775	SPORTS LIGHTING	MUSCO TAGS B3
	1	MUSCO TLC-BT-575 - MH: 16'	LED 5700K 75 CRI 52,000 LUMENS	480V 3-PHASE	575			SPORTS LIGHTING	
	1	CREE OSQ - MH: 30'	LED 5700K 70 CRI 16,599 LUMENS	480V 1-PHASE	130			PUBLIC LIGHTING	
SB4	8	MUSCO TLC-LED-1500 - MH: 70'	LED 5700K 75 CRI 160,000 LUMENS	480V 3-PHASE	1430	12145	13346	SPORTS LIGHTING	MUSCO TAGS B4
	1	MUSCO TLC-BT-575 - MH: 16'	LED 5700K 75 CRI 52,000 LUMENS	480V 3-PHASE	575			SPORTS LIGHTING	
	1	CREE OSQ - MH: 30'	LED 5700K 70 CRI 16,599 LUMENS	480V 1-PHASE	130			PUBLIC LIGHTING	
SC1, SC2	6	MUSCO TLC-LED-1500 - MH: 70'	LED 5700K 75 CRI 160,000 LUMENS	480V 3-PHASE	1430	9730	10751	SPORTS LIGHTING	MUSCO TAGS C1,C2
	2	MUSCO TLC-BT-575 - MH: 16'	LED 5700K 75 CRI 52,000 LUMENS	480V 3-PHASE	575			SPORTS LIGHTING	

GENERAL NOTES:

A. REFER TO LIGHT FIXTURE SCHEDULE GENERAL NOTES AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

MUSCO LIGHTING REPRESENTATIVE:

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MULTI-BUTTON SWITCH SCHEDULE

**NOTE: PROVIDE FACTORY BUTTON ENGRAVING FOR ALL MULTI-BUTTON SWITCHES WITH MORE THAN ONE BUTTON UNLESS NOTED OTHERWISE. REFER TO BUTTON LABEL COLUMN FOR TEXT.

SWITCH	BUTTON	BUTTON LABEL	CONTROLLED LOAD (ZONE)	BUTTON OPERATION
LV1a	1A	ON/RAISE	a - GENERAL	50%, RAISE
	1B	OFF/LOWER	a - GENERAL	0%, LOWER
LV1b	1A	ON/RAISE	a - GENERAL	80%, RAISE
	1B	OFF/LOWER	a - GENERAL	0%, LOWER
LV	1A	ON	GENERAL ON	ON
	1B	OFF	GENERAL OFF	OFF
LV3a	1	RAISE	CURRENT ZONE	RAISE
	2	LOWER	CURRENT ZONE	LOWER
	3	ON/OFF	GENERAL	80%, 0% TOGGLE
LV4a	1	ON/RAISE	a - GENERAL	80%, RAISE
	2	OFF/LOWER	a - GENERAL	0%, LOWER
	3	ON/RAISE	b - GENERAL	80%, RAISE
	4	OFF/LOWER	b - GENERAL	0%, LOWER
LV4b	1	ON	a - ON	ON
	2	OFF	a - OFF	OFF
	3	ON	b - ON	ON
	4	OFF	b - OFF	OFF
LV5a	1A	RAISE	ALL ZONES	RAISE
	1B	LOWER	ALL ZONES	LOWER
	2	ALL ON/OFF	ALL ZONES	100%, 0% TOGGLE
	3	z15-ON/OFF	z15 - GENERAL	100%, 0% TOGGLE
	4	z16-ON/OFF	z16 - GENERAL	100%, 0% TOGGLE
	5	z17-ON/OFF	z17 - GENERAL	100%, 0% TOGGLE
LV5b	1A	RAISE	ALL ZONES	RAISE
	1B	LOWER	ALL ZONES	LOWER
	2	a-ON/OFF	a - GENERAL	100%, 0% TOGGLE
	3	b-ON/OFF	b - GENERAL	100%, 0% TOGGLE
	4	c-ON/OFF	c - GENERAL	100%, 0% TOGGLE
	5	d-ON/OFF	d - GENERAL	100%, 0% TOGGLE
LV5c	1A	RAISE	CURRENT ZONE	RAISE
	1B	LOWER	CURRENT ZONE	LOWER
	2	ALL ON/OFF	a - GEN., b - GEN., c - DAYLIGHTING	100%, 0% TOGGLE
	3	a-ON/FFF	a - GENERAL	100%, 0% TOGGLE
	4	b-ON/OFF	b - GENERAL	100%, 0% TOGGLE
	5	c-ON/OFF	c - GENERAL	100%, 0% TOGGLE
			NOTE: ZONE c DIMMING CONTROLLED BY PHOTOCELL	
LV8a	1	ALL ON	a - GENERAL, b - GENERAL-1, c - AV	80%
	2	ALL OFF	a - GENERAL, b - GENERAL-1, c - AV	0%
	3	GENERAL RAISE	a - GENERAL	RAISE
	4	GENERAL LOWER	a - GENERAL	LOWER
	5	GENERAL RAISE	b - GENERAL	RAISE
	6	GENERAL LOWER	b - GENERAL	LOWER
	7	AV RAISE	c - AV	RAISE
	8	AV LOWER	c - AV	LOWER
LV8b	1	ALL ON	a - BOH, b - GENERAL-1, c - GENERAL	50%
	2	ALL OFF	a - BOH, b - GENERAL-1, c - GENERAL	0%
	3	GENERAL RAISE	a - BOH	RAISE
	4	GENERAL LOWER	a - BOH	LOWER
	5	GENERAL RAISE	b - GENERAL	RAISE
	6	GENERAL LOWER	b - GENERAL	LOWER
	7	AV RAISE	c - GENERAL	RAISE
	8	AV LOWER	c - GENERAL	LOWER

LIGHTING CONTROL SEQUENCE OF OPERATIONS

LIGHTING CONTROL SEQUENCE OF OPERATIONS

General Note: Confirm all sensor time delays with owner and local codes prior to final programming.

A. GENERAL REQUIREMENTS
1. Emergency Lighting: Emergency egress lighting is powered from emergency battery ballasts and drivers integral to fixtures designated as emergency. Upon loss of power, all lights designated as emergency shall turn on at full emergency battery back-up output. ICC-500 shelter emergency fixtures to be equipped with a battery back-up that provides 2-hours of operation. All other emergency light fixtures shall have a battery back-up capable of 90 minutes of operation.
2. Security Lighting: Night lights, labeled "NL" in building corridors for security purposes:
3. Lighting control types: A combination of Occupancy Sensors for smaller rooms and public spaces and Networked Lighting Control Panels for general circulation and larger public spaces.
4. Networked Lighting Control Panels to be controlled via a combination of Time Switched and manual control via Interfaces provided in Reception D100A and Vestibule G11. Time Switch controls to be set to automatically switch the general circulation and public spaces on during building hours of operation and off after hours. Preliminary suggested hours of operation are 6:00 AM to 9:00 PM.
5. Occupancy sensors in front of house and back of house rooms to be set to time out as noted.
6. Electrical rooms, Mechanical rooms, Technology rooms and Janitor Rooms to be provided with line voltage switches for manual control.

B. ROOM CONTROLLER RC1
1. Manual Control: Occupant can manually control lights via local switch(es).
2. Occupancy: Occupant must manually turn on lights via low voltage.
3. Vacancy: After 20 minutes, all controlled loads shall turn off.

C. ROOM CONTROLLER RCR
1. Manual Control: Building facilities personnel can manually override lights via local keyed switch. Switched conductors from room controller to be routed through keyed switch.
2. Occupancy: Lights are auto on by occupancy sensor with a line voltage keyed switch acting as a master override for lights.
3. Vacancy: After 20 minutes, all controlled loads shall turn off.

D. ROOM CONTROLLER RC2
1. Manual Control: Occupant must manually control lights via local switch(es).
2. Occupancy: Occupant must manually turn on lights.
3. Vacancy: Occupant must manually turn off lights.

E. ROOM CONTROLLER TW1
1. Manual Control: Occupant can manually control lights and dimming via local switch(es).
2. Color Tuning: Fixtures can be color tuned via manual controller
3. Occupancy: Occupant must manually turn on lights.
4. Vacancy: After 30 minutes, all controlled loads shall turn off.

F. ROOM CONTROLLER TW2
1. Manual Control: Occupant must manually control lights and dimming via local switch(es) from outside the room.
2. Color Tuning: Fixtures can be color tuned via manual controller
3. Occupancy: Occupant must manually turn on lights from outside the room.
4. Vacancy: Occupant must manually turn off lights from outside the room.

G. ROOM CONTROLLER D1A
1. Manual Control: Occupant can manually control lights and dimming via local switch(es).
2. Occupancy: Occupant must manually turn on lights.
3. Vacancy: After 30 minutes, all controlled loads shall turn off.

H. ROOM CONTROLLER D1B
1. Manual Control: Occupant can manually control lights and dimming via local switch(es).
2. Occupancy: Occupant must manually turn on lights.
3. Vacancy: After 20 minutes, all controlled loads shall turn off.

I. ROOM CONTROLLER D1D
1. Manual Control: Occupant must manually control lights and dimming via local switch(es).
2. Occupancy: Occupant must manually turn on lights.
3. Vacancy: Occupant must manually turn off lights.
4. (4) local room controllers to be networked together for control of gym lights.

J. ROOM CONTROLLER D1E
1. Manual Control: Occupant must manually control lights and dimming via local switch(es).
2. Occupancy: Occupant must manually turn on lights.
3. Vacancy: Occupant must manually turn off lights.

K. ROOM CONTROLLER D2A
1. Manual Control: Occupant can manually control lights and dimming via local switch(es).
2. Occupancy: Occupant must manually turn on lights.
3. Vacancy: After 30 minutes, all controlled loads shall turn off.

L. ROOM CONTROLLER D2B
1. Manual Control: Occupant can manually control lights and dimming via local switch(es).
2. Occupancy: Occupant must manually turn on lights.
3. Vacancy: After 30 minutes, all controlled loads shall turn off.

M. ROOM CONTROLLER D3A
1. Manual Control: Occupant must manually control lights and dimming via local switch(es).
2. Occupancy: Occupant must manually turn on lights.
3. Vacancy: Occupant must manually turn off lights.

N. ROOM CONTROLLER D3B
1. Manual Control: Occupant must manually control lights and dimming via local switch(es).
2. Occupancy: Occupant must manually turn on lights.
3. Vacancy: Occupant must manually turn off lights.

O. EXTERIOR LIGHTING
1. Driveway, Pedestrian and Building Mounted Light Fixtures Automatic Control: Fixtures shall be controlled with astronomical time switch control in conjunction with a single photocell via lighting control panels.
A. Fixtures to operate from dusk until dawn.
B. Coordinate additional programing requirements with owner.
C. Refer to lighting controls panel schedules and lighting control panel portion of sequence of operations for more information.

2. **Parking Lot Pole Mounted Fixture Automatic Controls:**
A. Fixtures to operate from dusk until dawn, on/off functionality controlled by Synapse Wireless (mesh type) system photocell, located in main electrical room.
B. Parking lots to have a 50% reduction in light output 1-hour after close of business per city of Lee's Summit requirements. Coordinate close of business/district schedule with district and programming. Dimming to be provided by wireless system via twist-lock lighting controller (7-pin receptacle) located on each fixture.
C. Coordinate additional programing requirements with owner.

P. LIGHTING CONTROL PANELS LCP1A, LCP1B, LCP1C, LCP1D, LCP1E, LCP1G, LCP1S
1. New Lighting Control Panels to be networked together and interface with exterior photocell and astronomical time clock. Lighting Control Panels to be programmed to turn interior lighting on automatically during building hours of operation (6:00AM to 9:00PM) and accept on/off and dimming input from master controller/local switches. Exterior lighting to operate dusk to dawn. All programming and hours of operation to be coordinated with school district personnel.
2. Master Control Switches to provide 2-hour override of time clock during scheduled building vacancy hours. Individual on/off and dimming of select zones to be controlled by Master Control Switches during non-standard building events.
3. Control zones:

Zone z1: spare

Zone z2: Pedestrian and Driveway Site Light Fixtures (does not include parking lot poles) controlled by astronomical time clock and photocell via lighting control panels. Fixtures to operate from dusk to dawn

Zone z3: Exterior Building Mounted Light Fixtures (does not include parking lot poles) controlled by astronomical time clock and photocell via lighting control panels. Fixtures to operate from dusk to dawn

Zone z4: spare

Zone z5: General Circulation Corridors Levels 1&2 – automatically operated during hours of operation by time clock and manually controlled by master control switch(es) via lighting control panels

Zone z6: Learning Commons Corridors Levels 1&2- automatically operated during hours of operation by time clock and manually controlled by master control switch(es) via lighting control panels

Zone z7: Learning Commons Accent Lighting Level 1– automatically operated during hours of operation by time clock and manually controlled by master control switch(es) via lighting control panels

Zone z8: Learning Commons Clerestory Lighting Level 1– automatically operated during hours of operation by time clock and manually controlled and dimmed by master control switch(es) via lighting control panels

Zone z9 Medium Group Areas – automatically operated during hours of operation by time clock and manually controlled and dimmed by master control switch(es) via lighting control panels

Zone z10 Large Stair Lighting Areas – automatically operated during hours of operation by time clock and manually controlled and dimmed by master control switch(es) via lighting control panels

Zone z11 Spare

Zone z12 Spare

Zone z13 Theatrical lighting - controlled locally via DMX lighting controls board.

Zone z14 Platform General Lighting - routed through lighting control panel, Manually operated on/off and dimming controls via local switch.

Zone z15 Competition Gym North Lighting Zone – Manually operated on/off and dimming controls by lighting control switches via lighting control panel.

Zone z16 Competition Gym Central Lighting Zone – Manually operated on/off and dimming controls by lighting control switches via lighting control panel.

Zone z17 Competition Gym South Lighting Zone – Manually operated on/off and dimming controls by lighting control switches via lighting control panel.

Zone z18 Commons North Cylindrical - automatically operated during hours of operation by time clock and manually controlled and dimmed by master control switch(es) via lighting control panels

Zone z19 Commons East Cylindrical Fixtures - automatically operated during hours of operation by time clock and manually controlled and dimmed by master control switch(es) via lighting control panels

Zone z20 Commons South Cylindrical Fixtures - automatically operated during hours of operation by time clock and manually controlled and dimmed by master control switch(es) via lighting control panels

Zone z21 Commons West Cylindrical Fixtures - automatically operated during hours of operation by time clock and manually controlled and dimmed by master control switch(es) via lighting control panels

Zone z22 Commons West Linear Fixtures - automatically operated during hours of operation by time clock and manually controlled and dimmed by master control switch(es) via lighting control panels

Zone z23 Commons East Linear Fixtures - automatically operated during hours of operation by time clock and manually controlled and dimmed by master control switch(es) via lighting control panels

Zone z24 Spare

Zone z25 Spare

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW DEVELOPMENT SERVICES LEE'S SUMMIT, MISSOURI
01/26/2021

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STATE OF MISSOURI
CURTIS A. OLDS
NUMBER PE-2018036640
PROFESSIONAL ENGINEER

Jan 18 2021
CURTIS A. OLDS
LICENSE # PE-2018036640

LEE'S SUMMIT MIDDLE SCHOOL #4

LEE'S SUMMIT R-7 SCHOOL DISTRICT

1001 SE BAILEY ROAD
LEE'S SUMMIT, MO 64081

PACKAGE 3 - BUILDING & SITE
10/08/20

REVISIONS

1	ADDENDUM 002	10/19/20
2	PR 004	1/18/21

13-20102-00

LIGHT FIXTURE SCHEDULES

E7.2

CURTIS A. OLDS